

Biological Briefs

BANKS, W. J. *Doves of War*. Fauna 5: 98-101. December, 1943.

Homing pigeons are saving lives and performing valuable messenger duties for the Allies. The feats of several pigeon heroes have been recognized in Dieppe, North Africa, and Guadalcanal. Pigeons were domesticated 5,000 years ago in Egypt, and were used as messengers by Solomon, the ancient Persians, and the Greeks. The development of fine homing breeds, however, waited until the 19th century, when they served to carry bank quotations and news. In the present conflict, pigeons carry messages from patrol and reconnaissance planes, from raiding parties, and from disabled planes, where radio would reveal information to the enemy. Private owners have turned over valuable stocks to the U. S. Signal Corps for the duration. Intensive breeding and improved training methods are constantly raising the level of performance. Homing flights of more than 200 miles and average speeds of 70 miles per hour are often made, and now birds are trained to return to mobile lofts in a truck or trailer. To prevent the carrying of messages to the enemy, all pigeons in England have been inspected and forced to fly; for the same reason, the Germans have killed thousands of birds in occupied lands. The dove of peace is now all out for war.

DAVIS, ELRICK B. *Tree Rings for Victory*. Nature Magazine 36: 483-484; 500. November, 1943.

Long-time weather forecasting is of great value in planning campaigns, and here is one of the realms in which tree-ring study is of value. Tree growth may be correlated with weather conditions, which in turn depend to some extent on the 11-year sunspot cycle. By correlating such studies on trees from various parts of the world, a global weather history charting a basic pattern of weather "velocity" and trends may be made. The forest operator also uses tree rings to study the best conditions for tree growth and the most economic time to harvest in sustained-yield "tree farming." Without damage to the living tree, an increment borer obtains a core showing growth rings. Each tree species has its optimum elevation above sea level; some grow best in pure stands, others in mixed groves. Differences in soil types and in amounts of average moisture likewise show their effects in tree rings.

WING, ANDREW S. *The Insect Battle-Front*. Nature Magazine 37: 36-37; 48. January, 1944.

Insecticides are aids in the present strug-

gle, not only in our gardens but on the battle-front. To help compensate for the loss of over half our supplies of derris-root (the main source of rotenone) from the South Pacific islands, Central and South America are developing greater yields of their rotenone-producing plants. Improved derris plants in Puerto Rico are giving high yields, while in South America the lance-fruit is being propagated and may prove an even better source of this insecticide. Pyrethrum, the toxic principle of a daisy-like flower, was produced formerly in Dalmatia; now it comes to us from Kenya, British East Africa. If its cultivation could be made commercially profitable, it could be grown in the United States. It is of wide use on the fighting front against disease-bearing insects. Nicotine sulfate, a tobacco by-product, is valuable mainly against sucking insects attacking plants. The mineral cryolite (sodium fluoaluminate) is a good substitute for the more toxic lead arsenate. These poisons are safe to use in the home garden if directions are carefully followed. Particular emphasis should be placed on using all dusts and sprays early in the season for greatest effectiveness.

RUTH SHERMAN STEIN

INDEX TO VOLUME 6

- About Ourselves, 187
- American Education Week, 16
- Anatomical Charts (review), 142
- Armed Forces Institute, Field Examination in High School Biology, Shailer Peterson, 51
- Armed Forces Institute, The (editorial), 36
- Biological Briefs, Ruth Sherman Stein, 45, 141, 189
- Biology and Soils, F. Olin Capps, 177
- Biology Notes, 168
- Biology Teachers' Club of Southwestern Pennsylvania, 72, 163
- Biology Teaching, An Experiment in, C. M. Farmer, 31
- Biology Teaching in War Time—Some Suggestions for Emphasis, Zachariah Subarsky, 27
- Biology, Wartime Student Research in, Arthur H. Bryan, 147
- Bird Banding as a Teaching Aid, Harold C. Burdick, 90
- Bird Banding in Secondary Schools, Jesse V. Miller, 77
- Bird Pictures, 92
- Bird Study, A Summer Program for, Olin Sewall Pettingill, Jr., 86
- Bird Study, Outdoor Projects in, Richard Lee Weaver, 75
- Bird Study, Some Suggestions for, 85
- Birds and Life Zones of the Pacific States, Gayle Pickwell, 80
- Birds and War, 84
- Birds As a Hobby, Grace Clarke, 93

BOOKS REVIEWED

- Anderson, Arthur L., *Introductory Animal Husbandry*, 165

- Bayles, Ernest E., and Burnett, R. Will, *Biology for Better Living*, 43
- Benedict, Ralph C., Knox, Warren W., and Stone, George K., *Life Science—A Biology*, 164
- Dixon, Malcolm, *Manometric Methods*, 142
- Emig, W. H., *Stain Technique*, 165
- Fitzpatrick, Frederick L., and Stiles, Karl A., *The Biology of Flight*, 44
- Glass, Bentley, *Genes and the Man*, 95
- Lazear, E. L., *Anatomy of the Dogfish*, 165
- Mayr, Ernst, *Systematics and the Origin of Species*, 45
- Munoz, Frank J., and Charipper, Harry A., *The Microscope and Its Use*, 45
- Pitluga, George E., *Science Excursions into the Community*, 142
- Whitney, David D., *Family Treasures*, 44
- Books for Bird Study, Recommended, 91
- Breukelman, John, *Preparation of Manuscripts for Publication*, 20
- Bryan, Arthur H., *War-time Student Research in Biology*, 147
- Bullock, F. May, see Hutchings
- Burdick, Harold C., *Bird Banding as a Teaching Aid*, 90
- By the Way, 32, 48, 119, 144, 150
- Capps, F. Olin, *Biology and Soils (Conservation Unit IV)*, 177
- Chicago Biology Round Table, 17, 84
- Chicago Catholic Science Teachers' Association, 144
- Clarke, Grace, *Birds As a Hobby*, 93
- Collecting Spring Peepers, Donald S. Lacroix, 138
- Conservation Units, *The Series of* (editorial), E. Laurence Palmer, 65
- Conservation Series, Unit I, *Seven Keys to Wildlife Conservation*, E. Laurence Palmer, 57
- Conservation Series, Unit II, *Our Nation's Health Lies in the Soil*, Ollie E. Fink, 129
- Conservation Series, Unit III, *Conservation of Fishes*, Howard H. Michaud, 153
- Conservation Series, Unit IV, *Biology and Soils*, F. Olin Capps, 177
- Constitutional Amendments, 15
- Correction, 111
- De Lourdes, Sister Mary, *Growth-Regulating Substances in Plants*, 151
- Display, A Show-Case, Robert C. McCafferty, 164
- Drugg, Helen, *Teaching by Taste*, 19
- Editorial Comment, 12, 16, 36, 38, 65, 85, 110
- Egloff, Edith, *Books for Bird Study*, 91
- Election Notice, 120
- Elzey, Lydia, *An Elementary School Garden Project*, 115
- Epstein, Benjamin, see Hutchings
- Evans, Thomas Horace, M. D., *Skeletal Teaching Material*, 34
- Farmer, C. M., *An Experiment in Biology Teaching*, 31
- Fink, Ollie E., *Our Nation's Health Lies in the Soil (Conservation Unit II)*, 129
- Fishes, *Conservation of*, Howard Michaud, 153
- Five Years Ago, 17
- Formulas for Biological Science, 47, 71, 143
- Fruit and the Home Garden, B. S. Pickett, 161
- Garden Books, *Some Good*, Alexander MacVittie, 175
- Garden Education in the High School, Paul H. Jones, 139
- Garden Issue, This (editorial), M. C. Lichtenwaller, 110
- Garden, Planning a Small City, Lee A. Somers, 126
- Garden Project, An Elementary School, Lydia Elzey, 115
- Gardening in the Cleveland Schools, Science Includes, Paul R. Young, 112
- Gardens in Chicago, Children's, Fred G. Heuchling, 103
- Gardens, special issue, February, 101
- Grant, Adele Lewis, *Books for Bird Study*, 92
- Greater Cleveland Biology Club, 94
- Growth-Regulating Substances in Plants, Sister Mary De Lourdes, 151
- Health Lies in the Soil, Our Nation's, Ollie E. Fink, 129
- Heuchling, Fred G., *Children's Gardens in Chicago*, 103
- High School Biology Goes to War, Hutchings, Lois M.; Epstein, Benjamin; and Bullock, F. May, 5
- Himebaugh, Keith, *A Message from the United States Department of Agriculture*, 111
- Hochbaum, H. W., *Victory Gardens in 1944, How Teachers May Help*, 101
- Hormones or Hormone-like Substances, Plant Growth Due to, Jeannette Duer Sheridan, 167
- Houdek, P. K., Letter, 12
- Hutchings, Lois M.; Epstein, Benjamin; and Bullock, F. May, *High School Biology Goes to War*, 5
- Hygiene and Public Health, Report of Reference Committee on, 14
- Infantile Paralysis, From the National Foundation for, 143
- IN MEMORIAM
- Paul B. Mann, 42
- J. L. Sloanaker, 17
- Jones, Paul H., *Garden Education in the High School*, 139
- Junior Audubon Societies, 84
- Knaus, Marie, *Pointers by Seasons*, 118
- Laboratory Drawings, A "Key" to Corrections for, Mary D. Rogick, 8
- Lacroix, Donald S., *Collecting Spring Peepers*, 138
- Letter from Illinois, P. K. Houdek, 12
- Letter from Massachusetts, Irving C. Keene, 12
- Letter from New Guinea, M. A. Rudner, 12
- Letter from Washington, A, 111
- Lichtenwaller, M. C., *This Garden Issue*, 110
- Lockwood, Betty, *Ornithology*, 85
- MacVittie, Alexander, *Some Good Garden Books*, 175
- Manuscripts for Publication, Preparation of, John Breukelman, 20
- Mathematics of Digestion, The, Burton Wilner, 33
- McCafferty, Robert C., *A Show-Case Display*, 164
- Medical Laboratory Techniques, A War Course in Applied Biology, 123

Meetings, 17, 41, 42, 70, 84, 94, 110, 144, 163
 Membership Committee Report, 18, 188
 Message from the United States Department of Agriculture, Keith Himebaugh, 111
 Michaud, Howard H., Conservation of Fishes (Conservation Unit III), 153
 Micro-projector, A Simple, Dempsey J. Snow, 10
 Miller, Jesse V., Bird Banding in Secondary Schools, 77
 Movies and Slidefilms (review), Lyne S. Metcalfe, 166
 Natural History Leadership Training Course, 166
 New Catalog-Directory, 120
 New York Association of Biology Teachers, 163
 Notes and News, 17, 41, 71, 111, 119, 140
 Oderkirk, G. C., Rodent Pests of Your Victory Garden, 128
 Officers for 1944-1945, 188
 Organizations, State and Local, 11, 119, 167
 Ornithology (editorial), Betty Lockwood, 85
 Ornithology, special issue, January, 75
 Palmer, E. Laurence, Seven Keys to Wildlife Conservation (Conservation Unit I), 57
 Palmer, E. Laurence, The Series of Conservation Units (editorial), 65
 Papuan Notes, Private Morrison A. Rudner, 66
 Pennsylvania Junior Academy of Science, The, 110
 Peterson, Shailer, The United States Armed Forces Institute Field Examination in High School Biology, 51
 Pettingill, Olin Sewall, Jr., A Summer Program for Bird Study, 86
 Pickett, B. S., Fruit and the Home Garden, 161
 Pickwell, Gayle, Birds and Life Zones of the Pacific States, 80
 Plant Material for the Teaching of Biological Principles, Henry G. Wendler, 108
 Pointers by Seasons, Marie Knauz, 118
 President's Page, 13, 185
 Recent Publications, 43, 176
 Representative Assembly, Fall Meeting of, 41, 70
 Rodent Pests of Your Victory Garden, G. C. Oderkirk, 128
 Rogick, Mary D., A "Key" to Corrections for Laboratory Drawings, 8
 Rudner, Private Morrison A., Papuan Notes, 66
 Russell, M. A., Highland Park's School Victory Gardens, 171
 School Activities, Suggestions for, 94
 Secretary, From the, 70, 110, 186
 Sheridan, Jeannette Duer, Plant Growth Due to Hormones or Hormone-like Substances, 167
 Skeletal Teaching Material, Thomas Horace Evans, M.D., 34

Snow, Dempsey J., A Simple Micro-projector, 10
 Somers, Lee A., Planning A Small City Garden, 126
 Southern California Association of Life Science Teachers, 42
 Special Issues, 18
 Subarsky, Zachariah, Biology Teaching in War Time—Some Suggestions for Emphasis, 27
 Teaching by Taste, Helen Drugg, 19
 Victory Gardens, Highland Park's School, M. A. Russell, 171
 Victory Gardens in 1944, How Teachers May Help, H. W. Hochbaum, 101
 War Biology, 5, 13, 14, 27, 36, 51, 66, 84, 111, 123, 147
 Washington Conferences, The, 13
 Weaver, Richard Lee, Outdoor Projects in Bird Study, 75
 Wendler, Henry G., Growing Live Plant Material for the Teaching of Biological Principles in the Biology Class, 108
 Wildlife Conservation, Seven Keys to, E. Laurence Palmer, 57
 Wilner, Burton, The Mathematics of Digestion, 33
 Young, Paul R., Science Includes Gardening in the Cleveland Schools, 112

BIOLOGY SLIDEFILMS

Eight rolls comprising 288 detailed drawings and descriptions of all important invertebrate and vertebrate animals on 35 MM SLIDEFILMS project to full screen size.

Slidefilms in all High School sciences.

Visual Sciences—264C, Suffern, N. Y.

KODACHROME $\frac{2}{x} \frac{2}{2}$ LANTERN SLIDES

covering, for ordinary teaching requirements, every field of interest to the teacher of biology and physiology, including animal and plant histology, bacteriology and parasitology. Pre-nurse training and pre-medical and pre-dental subjects a specialty. Thousands in use from coast to coast. More than fifteen hundred C.B.S. master slides available for duplication, also, Holt and Ingles extensive collections of Calif. plant and animal Kodachromes. Lists and prices on request.

CALIFORNIA BIOLOGICAL SERVICE

1612 W. Glenoaks Blvd., Glendale-1, Calif.